A. AMENDMENTS TO CLAIMS

Please amend the claims as indicated hereinafter.

CLAIMS

What is claimed is:

1	1.	(Currently Amended) A method of relating data stored in one or more content
2		management systems for an enterprise, the method comprising the steps of:
3		managing a first information object data structure corresponding to a first information
4		object, wherein the first information object is data stored in a file;
5		managing a first concept data structure corresponding to a first concept;
6		managing a second concept data structure corresponding to a second concept;
7		managing a first relationship data structure, wherein the first relationship data
8		structure comprises a first reference to the first concept data structure and a
9		second reference to the second concept data structure;
10		managing a second relationship data structure, wherein the second relationship data
11		structure comprises a third reference to the first concept data structure and a
12		fourth reference to the first information object data structure;
13		receiving a request for a document referring to the second concept; and
14		generating the document referring to the second concept based on a set of
15		information, wherein the set of information comprises the first relationship
16		data structure, the second relationship data structure, the first information
17		object data structure, and the first information object.
.18		managing a plurality of information chunks in one or more content management
19		systems, each chunk of the plurality of information chunks comprising a unit
20		of data for storage and retrieval operations; and

managing a vocabulary database comprising a plurality of data structures describing
atomic concepts among names in an enterprise specific vocabulary and a
plurality of data structures describing relationships among the atomic
concepts,
wherein the plurality of data structures describing atomic concepts include a first
information object data structure comprising data indicating a first reference
to a first chunk in the one or more content management systems, and
wherein the plurality of data structures describing relationships include a first
relationship data structure describing a relationship between the first
information object data structure and a second concept data structure of the
plurality of data structures describing atomic concepts.

- 2. (Currently Amended) The method of claim 1, wherein the second concept is different than the first concept information object.
- 1 3. (Currently Amended) The method of claim 1, wherein the first relationship data
 2 structure <u>further comprises a reference to describes the relationship involving a third</u>
 3 concept data structure <u>of the plurality of data structures describing atomic concepts</u>.
- 4. (Currently Amended) The method of claim 1, wherein the relationships include
 relationships of second relationship data structure corresponds to a child-of
 relationship type; wherein the first concept and second concept are each one of a set
 of atomic concepts; a hierarchy is a subset of the set of atomic concepts related by a
 series of one or more relationships of the child-of relationship type to a root concept
 of the set of atomic concepts; and the second first concept data structure describes a
 concept that belongs to a particular hierarchy having a particular root concept.

- 1 5. (ORIGINAL) The method of claim 4, wherein the particular root concept is one of an
- 2 information type root concept, a document type root concept, a product type root
- 3 concept, a technology type root concept, a solution type root concept, and a user type
- 4 root concept.
- 1 6. (Currently Amended) The method of claim 5, wherein the first relationship data
- 2 structure describes the relationship involving a third concept data structure of the
- 3 plurality of data structures describing atomic concepts; and the third the second
- 4 concept data structure describes a concept that belongs to a different second hierarchy
- 5 having a different second root concept, wherein the second root concept is different
- 6 <u>from the particular root concept.</u>
- 1 7. (Currently Amended) The method of claim 1, wherein the first <u>information object</u>
- 2 chunk is one of a block of text, an application, a query for a database, a vector
- graphic, an image, audio data, and video data.
- 1 8. (Currently Amended) The method of claim 1, wherein the first fourth reference
- 2 comprises one of a file name, a network resource address, a universal resource locator
- 3 (URL) address, a record identification in a predetermined database, a record
- 4 identification in a predetermined content management system.
- 1 9. (Currently Amended) The method of claim 1, wherein the first information object is
- 2 <u>one of a plurality of information objects</u>; the plurality of information ehunks objects
- reside in a plurality of content management systems; and said step of managing the
- 4 plurality of information ehunks objects further comprises employing a data
- 5 integration tool to retrieve the first ehunk information object from a content
- 6 management system that resides on a remote platform accessible through a network.

- 1 10. (Currently Amended) The method of claim 1, further comprising the step of
- 2 generating and storing a subset of the plurality of the first information chunks object
- 3 into a content cache based at least in part on data in a the second relationship data
- 4 structure describing a second relationship of the relationships.
- 1 11. (Currently Amended) The method of claim 10, wherein the first concept data
- 2 structure and the second concept data structure are stored in a vocabulary database;
- and wherein the method further comprises[[ing]] the step of generating and storing a
- 4 subset of the vocabulary database into a concept cache based at least in part on data in
- 5 the second relationship data structure.
- 1 12. (Currently Amended) The method of claim 11, further comprising the step of
- 2 generating a page for sending over a network to a client process based on data in
- 3 wherein the set of information comprises the concept cache and the content cache.
- 1 13. (Currently Amended) The method of claim 12, wherein the document page-is
- 2 organized based at least in part on data in a the second relationship data structure in
- 3 the concept cache.
- 1 14. (Currently Amended) The method of claim 12, wherein the document page displays
- 2 information based on at least one information chunk object in the content cache.
- 1 15. (ORIGINAL) The method of claim 11, further comprising the step of editing at least
- 2 one of the concept cache and the content cache.
- 1 16. (Currently Amended) The method of claim 10, said further comprising step of
- 2 generating and storing <u>a</u> the subset of the plurality of information chunks objects, said
- 3 step of generating and storing the plurality of information objects further comprising

- combining at least two information ehunks objects of the plurality of information

 chunks objects into a single information chunk object in the content cache.
- 1 17. (Currently Amended) The method of claim 16, wherein a second information object
 2 corresponds to a second information object data structure, and a third relationship
 3 data structure comprises references to the second information object data structure
 4 and the second concept data structure. wherein the at least two information chunks
 5 objects have corresponding information object data structures which are related to
 6 corresponding concept data structures; and at least two of the corresponding concept
 7 data structures are related by the second relationship.
- 1 18. (Currently Amended) The method of claim 11, said step of generating and storing
 2 [[a]] the subset of the vocabulary database into [[a]] the concept cache further
 3 comprising de-normalizing the concept cache to improve speed of retrieval by
 4 allowing a concept data structure for a concept that participates in more than one
 5 relationship to be stored more than once in the concept cache.
- 1 19. (Currently Amended) The method of claim 1, said managing the plurality of
 2 information chunks comprising further comprising employing a first set of software
 3 tools including at least one [[of]] tool[[s]] for defining a type instance for the first
 4 information object data structure type and instance and a tool for defining a type and
 5 instance for the first relationship data structure type and instance.
- 1 20. (Currently Amended) The method of claim 1, further comprising the steps of
 2 generating and storing a first subset of [[the]] <u>a</u> plurality of information chunks
 3 <u>objects</u> into a first content cache for managing content of a Web page.

- 1 21. (Currently Amended) The method of claim 20, further comprising the step of 2 managing the first subset by employing a second set of software tools including at 3 least one of: a tool[[s]] for editing the first information object data structure, a tool for editing the first relationship data structure, a tool for populating the first content 4 5 cache, a tool for populating a first concept cache, a tool for retrieving from the first 6 content cache, a tool for combining two or more information ehunks objects into a 7 new information chunk object, and a tool for de-normalizing the first concept cache to 8 improve speed of retrieval by allowing a concept data structure for a concept that 9 participates in more than one relationship to be stored more than once in the first 10 concept cache.
- 1 22. (Currently Amended) The method of claim 20, wherein the first subset of the
 2 plurality of information ehunks objects excludes information ehunks objects that have
 3 become obsolete.
- 1 23. (Currently Amended) The method of claim 20, wherein the first subset of the
 2 plurality of information ehunks objects excludes information ehunks objects that have
 3 not been released.
- 1 24. (ORIGINAL) The method of claim 20, further comprising the steps of generating
 2 and storing a second subset of the first content cache into a second content cache for
 3 staging content for the Web page.
- 1 25. (Currently Amended) The method of claim 24, further comprising the step of
 2 managing the second subset by employing a third set of software tools including at
 3 least one of: a tool[[s]] for editing the first information object data structure, a tool for
 4 populating the second content cache, a tool for populating a second concept cache, a
 5 tool for ensuring each information ehunk object in the second content cache has an

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6		information object data structure and a relationship to another concept in the second
7		concept cache, and <u>a tool</u> for forming a search index for the second content cache.
1	26.	(ORIGINAL) The method of claim 24, further comprising the step of replicating the
2		second content cache to one or more Web servers for providing content to a Web
3		page generating process on each of the one or more Web servers.
1	2731	. (Withdrawn)
1	32.	(Currently Amended) A method of relating data stored in one or more content
2		management systems for an enterprise, the method comprising the steps of:
3		managing a plurality of information chunks in one or more content management
4		systems, each chunk of the plurality of information chunks comprising a unit
5		of data for storage and retrieval operations;
6		managing a vocabulary database comprising a plurality of data structures describing
7		atomic concepts among names in an enterprise-specific vocabulary and a
8		plurality of data structures describing relationships among the atomic
9		concepts, and
10		The method of Claim 1, further comprising the step of:
11		arranging content in [[a]]the document based at least in part on the second
12		relationship data structure.data in the vocabulary database, the content based
13		at least in part on an information chunk of the plurality of information chunks.

33. (Withdrawn)

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1 34. (Currently Amended) A computer-readable medium carrying one or more sequences 2 of instructions for relating data stored in one or more content management systems

for a	n enterprise, which instructions, when executed by one or more processors, cause
the o	ne or more processors to carry out the steps of:
mana	nging a plurality of information chunks in one or more content management
	systems, each chunk of the plurality of information chunks comprising a unit
	of data for storage and retrieval operations; and
mana	aging a vocabulary database comprising a plurality of data structures describing
	atomic concepts among names in an enterprise-specific vocabulary and a
	plurality of data structures describing relationships among the atomic
	concepts,
wher	ein the plurality of data structures describing atomic concepts include a first
	information object data structure comprising data indicating a first reference
	to a first chunk in the one or more content management systems, and
wher	ein the plurality of data structures describing relationships include a first
	relationship data structure describing a relationship between the first
	information object data structure and a second concept data structure of the
	plurality of data structures describing atomic concepts.
mana	aging a first information object data structure corresponding to a first information
	object;
mana	aging a first concept data structure corresponding to a first concept;
mana	aging a second concept data structure corresponding to a second concept;
mana	aging a first relationship data structure, wherein the first relationship data
	structure comprises a first reference to the first concept data structure and a
	second reference to the second concept data structure;
mana	aging a second relationship data structure, wherein the second relationship data
	structure comprises a third reference to the first concept data structure and a
	fourth reference to the first information object data structure:

29		receiving a request for a document referring to the second concept; and
30		generating the document referring to the second concept based on a set of
31		information, wherein the set of information comprises the first relationship
32		data structure, the second relationship data structure, the first information
33		object data structure, and the first information object.
1	35.	(Withdrawn)
1	36.	(Currently Amended) The computer-readable medium of Claim 34, further
2		comprising A computer-readable medium carrying one or more sequences of
3		instructions for relating data stored in one or more content management systems for
4		[[an]] the enterprise, which instructions, when executed by one or more processors,
5		cause the one or more processors to carry out the steps of:
6	•	managing a plurality of information chunks in one or more content management
7		systems, each chunk of the plurality of information chunks comprising a unit
8		of data for storage and retrieval operations;
9		managing a vocabulary database comprising a plurality of data structures describing
10		atomic concepts among names in an enterprise-specific vocabulary and a
11		plurality of data structures describing relationships among the atomic
12		concepts, and
13		arranging content in [[a]]the document based at least in part on the second
14		relationship data structure. data in the vocabulary database, the content based
15		at least in part on an information chunk of the plurality of information chunks.
1	37.	(Withdrawn)
1	38.	(Currently Amended) A system for relating data stored in one or more content
2		management systems for an enterprise, comprising:

means	for managing a first information object data structure corresponding to a first
	information object;
means	for managing a first concept data structure corresponding to a first concept;
means	for managing a second concept data structure corresponding to a second
	concept;
means	for managing a first relationship data structure, wherein the first relationship
	data structure comprises a first reference to the first concept data structure and
	a second reference to the second concept data structure;
means	for managing a second relationship data structure, wherein the second
	relationship data structure comprises a third reference to the first concept data
	structure and a fourth reference to the first information object data structure;
means	for receiving a request for a document referring to the second concept; and
means	for generating the document referring to the second concept based on a set of
	information, wherein the set of information comprises the first relationship
	data structure, the second relationship data structure, the first information
	object data structure, and the first information object.
means	for managing a plurality of information chunks in one or more content
	management systems, each chunk of the plurality of information chunks
	comprising a unit of data for storage and retrieval operations; and
means	for managing a vocabulary database comprising a plurality of data structures
	describing atomic concepts among names in an enterprise specific vocabulary
	and a plurality of data structures describing relationships among the atomic
	concepts,
where	in the plurality of data structures describing atomic concepts include a first
	information object data structure comprising data indicating a first reference
	to a first chunk in the one or more content management systems, and

29		wherein the plurality of data structures describing relationships include a first
30		relationship data structure describing a relationship between the first
31		information object data structure and a second concept data structure of the
32		plurality of data structures describing atomic concepts.
1	39.	(Withdrawn)
1	40.	(Currently Amended) The system of Claim 38, further comprising: A system for
2		relating data stored in one or more content management systems for an enterprise,
3		comprising:
4		means for managing a plurality of information chunks in one or more content
5		management systems, each chunk of the plurality of information chunks
6		comprising a unit of data for storage and retrieval operations;
7		means for managing a vocabulary database comprising a plurality of data structures
8		describing atomic concepts among names in an enterprise-specific vocabulary
9		and a plurality of data structures describing relationships among the atomic
10		concepts, and
l 1		means for arranging content in [[a]]the document based at least in part on the second
12		relationship data structure. data in the vocabulary database, the content based
13		at least in part on an information chunk of the plurality of information chunks
1	41.	(Withdrawn)
1	42.	(Currently Amended) A computer system for relating data stored in one or more
2		content management systems for an enterprise, the computer system comprising:
3		[[a]]one or more computer-readable mediums for storing a plurality of information
4		chunks in one or more content management systems, each chunk of the
5		plurality of information chunks comprising a unit of data for storage and

6	retrieval operations, and a vocabulary database comprising a plurality of data
7	structures describing atomic concepts among names in an enterprise specific
8	vocabulary and a plurality of data structures describing relationships among
9	the atomic concepts, wherein the plurality of data structures describing atomic
10	concepts include a first information object data structure comprising data
11	indicating a first reference to a first chunk in the one or more content
12	management systems, and the plurality of data structures describing
13	relationships include a first relationship data structure describing a
14	relationship between the first information object data structure and a second
15	concept data structure of the plurality of data structures describing atomic
16	concepts; and
17	for managing a first information object data structure corresponding to a first
18	information object;
19	for managing a first concept data structure corresponding to a first concept;
20	for managing a second concept data structure corresponding to a second concept;
21	for managing a first relationship data structure, wherein the first relationship data
22	structure comprises a first reference to the first concept data structure and a
23	second reference to the second concept data structure;
24	for managing a second relationship data structure, wherein the second relationship
25	data structure comprises a third reference to the first concept data structure
26	and a fourth reference to the first information object data structure; and
27	one or more processors configured for managing the plurality of information chunks,
28	and managing the vocabulary database.
29	for receiving a request for a document referring to the second concept; and
30	for generating the document referring to the second concept based on a set of
31	information, wherein the set of information comprises the first relationship

32		data structure, the second relationship data structure, the first information
33		object data structure, and the first information object.
1	43.	(Withdrawn)
1	44.	(Currently Amended) [[A]] The computer system of Claim 42, further comprising:
2		for relating data stored in one or more content management systems for an enterprise,
3		the system comprising:
4		a computer-readable mediums for storing a plurality of information chunks in one or
5		more content management systems, each chunk of the plurality of information
6		chunks comprising a unit of data for storage and retrieval operations, and a
7		vocabulary database comprising a plurality of data structures describing
8		atomic concepts among names in an enterprise-specific vocabulary and a
9		plurality of data structures describing relationships among the atomic
10		concepts; and
11		one or more processors configured for managing the plurality of information chunks,
12		managing the vocabulary database, and arranging content in [[a]]the document
13		based at least in part on the second relationship data structure. data in the
14		vocabulary database, the content based at least in part on an information
15		chunk of the plurality of information chunks.
1	45.	(Withdrawn)
1	46.	(Cancelled)

B. REPLACEMENT DRAWINGS

FIG. 4C and 4F were objected to under 37 CFR 1.83(a) as being of insufficient quality to permit examination. Replacement drawings for 4C, 4D, 4E, 4F, 4G, and 4H are attached on separate replacement sheets herewith. Each of the drawings was modified to improve the quality of the drawing or meet formal requirements.